optical bundle is comprised of an array of optical fibers arranged surrounding a receiving fiber, wherein an intensity of said optical communication signal received by said receiving fiber relative to an intensity of said optical communication signal received by said array of optical fibers is used to adjust an orientation of said receiving unit.

5

REMARKS

The present application was filed on February 29, 2000 with claims 1 through 20. Claims 1 through 20 are presently pending in the above-identified patent application. Claim 1 is proposed to be amended herein.

In the Office Action, the Examiner rejected Claims 1, 9, and 17 under 35 U.S.C. § 102(b) as being anticipated by Vischulis (United States Patent Number 3,749,924) and rejected Claims 2-4, 10-12, and 18 under 35 U.S.C. §103(a) as being unpatentable over Vischulis in view of Hatori (United States Patent Number 5,299,560). The Examiner indicated that claims 5-8, 13-16, and 19-20 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

The present invention is directed to a method and apparatus for aligning and maintaining the alignment of the transmitting unit and the receiving unit in an optical wireless communication system. The receiving unit includes an optical bundle positioned at the focal point of an objective optic element. The optical bundle is comprised of an array of optical fibers, arranged surrounding the receiving fiber. The receiving unit also includes a number of detectors that measure the optical signal strength on a corresponding fiber in the optical bundle. The array of fibers is used to detect the location of the received signal relative to the receiving optical fiber and to provide

Independent Claims 1, 9 and 17

Claims 1, 9, and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by Vischulis. In particular, the Examiner asserts that Vischulis teaches "wherein said array of optical
10 fibers detects a location of said signal relative to said receiving fiber and provides feedback to adjust an orientation of said receiving unit."

Applicant notes that Vischulis is directed to a photoelectric position detector for a

line or edge target. Vischulis does not address the transmission or reception of optical communication signals, but discloses an "apparatus for detecting the position of a line or edge target such as may be formed by printed areas of different reflectivity and for deriving an electrical output signal which is a function of the deviation of the target from a reference position." Col. 1, lines 4-8. Vischulis teaches that, in response to "any change in the intensity of the light received by a photocell detector..., the lateral position of the target will be adjusted by the control system in an effort to correct the light variation." Col. 1, lines 16-21. Thus, Vischulis repositions *a line or edge target* based on the intensity of reflected light received by each fiber in relation to the target *image*. The present invention, on the other hands, adjusts the orientation of the signal *receiving unit* itself (i.e., not the target) in response to the intensity of light from an optical communication signal received by fibers in relation to the intensity of light received by a receiving fiber.

Independent claim 1, as amended, requires adjusting an orientation of the receiving unit based on "an intensity of said optical communication signal received by said receiving fiber relative to an intensity of said optical communication signal received by said array of optical fibers." Independent claim 9 requires "feedback to *adjust an orientation of said receiving unit.*" Independent claim 17 requires "*repositioning said optical bundle.*"

Thus, Vischulis does not disclose or suggest repositioning the receiving fibers of an optical communication system, as required by independent claims 1, 9, and 17.

Additional Cited References

Hatori was also cited by the Examiner in rejecting claims 2-4, 10-12, and 18 for its disclosure "that it is advantageous to recess the receiving fiber, because the lens can be disposed in the recess." Applicants note that Hatori is directed to an endoscope and does not address the subject of wireless optical communication systems nor optical communication fibers. Thus, Hatori does not disclose or suggest repositioning the receiving fibers of an optical communication system, as required by independent claims 1, 9, and 17.

Dependent Claims 2-8, 10-16 and 18-20

Dependent Claims 2-4, 10-12, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Vischulis, and further in view of Hatori

Claims 2-8, 10-16, and 18-20 are dependent on Claims 1, 9, and 17, respectively, and are therefore patentably distinguished over Vischulis and Hatori (alone or in any combination) because of their dependency from amended independent Claims 1, 9, and 17 for the reasons set forth above, as well as other elements these claims add in combination to their base claim. The Examiner has already indicated that claims 5-8, 13-16, and 19-20 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,

Kevin M. Mason

Date: April 29, 2003

Kevin M. Mason
Attorney for Applicant(s)
Reg. No. 36,597
Ryan, Mason & Lewis, LLP
1300 Post Road, Suite 205
Fairfield, CT 06430
(203) 255-6560

VERSION MARKED TO SHOW ALL CHANGES

IN THE CLAIMS:

Please amend the claims as follows:

1. (Amended) An optical receiving unit for a wireless communications link, said optical receiving unit comprising:

a receiving unit including at least one objective optic element; and

an optical bundle operable to receive an optical communication signal, wherein said optical bundle is comprised of an array of optical fibers arranged surrounding a receiving fiber, wherein an intensity of said optical communication signal received by said receiving fiber relative to an intensity of said optical communication signal received by said array of optical fibers is used to adjust an orientation of said receiving unit.